

Presentation for a Scientific Audience

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Aim of Talk

A brief overview of how to give a presentation to a scientific audience.

Disclaimers:

- Some people have a 'stage presence' and give riveting talks.
- Others do not; we have to practice.
- This is not a riveting talk, but it has been well prepared.

Acknowledgment:

https://www.biostat.wisc.edu/~kbroman/presentations/giving_talks.pdf

Plan of Talk

- Why give a scientific presentation?
- Structure of a scientific presentation
- Figures
- The text-free talk
- Pitfalls

Why give a scientific presentation?

Because it's part of the assessment for this module.

Just as importantly,

- To tell people stuff
- To become known
- To get people to read your papers

Key Principles

Obvious ones:

- Know your audience (don't overestimate them)
- Take it seriously (you're being judged)
- Rehearse!

More philosophical ones:

- Keep things simple (have one or two key points)
- Tell a story (Research Question)
- There are lots of ways to be good (and bad)
- Images over text
- **Provide a logical unfolding of the information**

More Principles

- Humor can be good (sometimes)
- Start with an application
- Nobody wants to hear the technicalities
- Give a good summary at the end
- No bulls..t; admit ignorance
- Don't go over the time limit (rehearse, 'know your way around your talk')

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Don't blame me: <https://thoughtcatalog.com>

Structure of a scientific presentation

The structure is standard:

- Background (RQ, framing RQ, motivation, outline,...)
- Methodology
- Results
- Conclusions / future directions

Pratfalls #1

- Spend too much time on the background section;
- Unlabeled graphs; unreadable or meaningless labels;
- Use graphs/tables straight from a paper;
- Include raw computer output;
- **Read the slides verbatim;**
- Cover everything you've ever done.

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- Reveal only one bullet point at a time;
- Spend a lot of time discussing technical details;
- Focus on your computer rather than the audience;
- Use a fussy background or a canned powerpoint background;
- **Write full paragraphs.**

Conclusions

This is not a mistake (know your audience)

10-15 minute talk

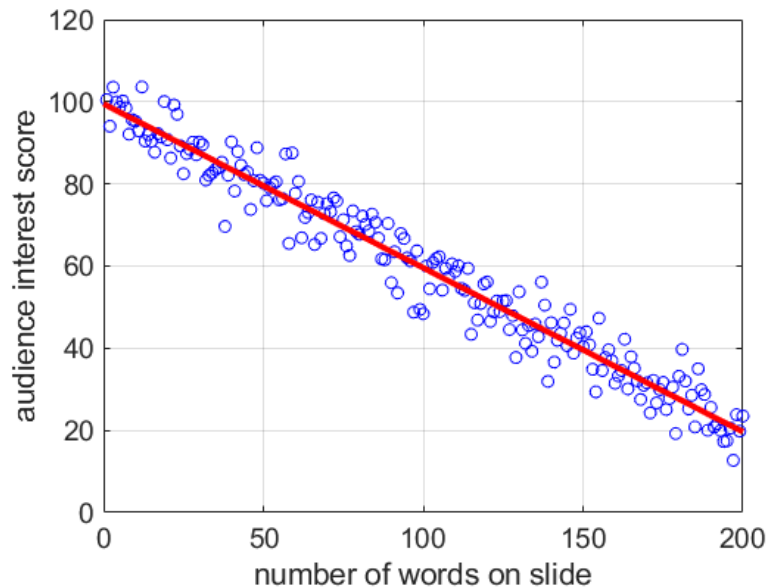
Requires a compression of the structure:

- Explain the problem, sketch the solution, give a few results
- 5 – 15 slides
- Simplify!

Pratfalls #3 – **Go over the time limit.**

Consequently, *know your way around the talk*, know the *short cuts* (IKEA-style).

The text-light talk is fashionable.



Figures

- High-resolution, custom-made for the talk;
- pdf/eps versus png/jpeg;
- Wordy slides seem more for the speaker than the audience;
- Requires high-quality figures and captions in full sentences.

Practice

- Me: 3 practice runs for one presentation. You: as many as necessary.
- Think it through carefully (imagine what the audience is thinking)
- Focus on the transitions and the tricky bits
- Do you know how long it will take?
- Don't let practice kill your enthusiasm – some ad lib on the day, especially references to other speakers.

Q&A

- Anticipate questions in advance.
- Some questions are obvious, a spare slide can be kept in reserve.
- It's not politics, you don't have to dodge the question:
 - ▶ "I'll have to give that some thought..."
 - ▶ "I'm glad for the suggestion..."
- But you can turn question around, "I have not done X, but I have done Y, which is similar, and Y did not change my results..."